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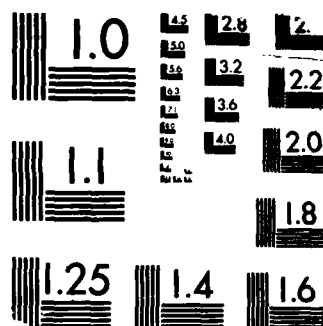
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Identifying Enlistment Motivators
with an Automated Instrument

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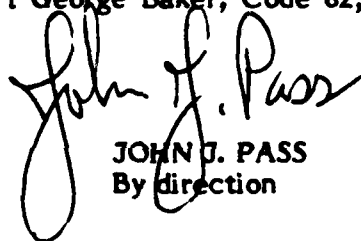From: Commanding Officer, Navy Personnel Technical Center

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1. This research describes the development of a fast computerized test of enlistment motivation suitable for use on the Army's Joint Optical Information Network (JOIN) system during applicant interviews. In addition to its application as support technology for recruiters, such a test could be used to track changes over time in enlistment motivation and to establish links between different enlistment motives, job performance, and retention.

2. This research was funded by the U.S. Army Recruiting Command.

3. The research reported here is expected to benefit the recruiting branches of all the armed services and the military research community. Requests for copies of this report should be addressed to Dr. Herbert George Baker, Code 62, AV 553-7639 or (619) 553-7639.

JOHN J. PASS
By direction

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Identifying Enlistment Motivators with an Automated Instrument

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This research describes the development of a fast, computerized test of enlistment motivation suitable for use on the Army's Joint Optical Information Network (JOIN) system during applicant interviews. In addition to its application as support technology for recruiters, such a test has potential application to long-term tracking of changes in enlistment motivation and to links between different enlistment motives, job performance, and retention.

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SUMMARY

Problem

Due to a declining youth population and vigorous competition for the most promising American youth, today's recruitment effort demands a rapid method for identifying individual motivators for enlistment. Such a method would personalize the recruiter's sales presentation and could facilitate subsequent classification and assignment.

Purpose

The objective of this effort was to develop an automated instrument that could identify and rank-order those aspects of military service known to motivate toward enlistment.

Approach

An IBM personal computer program was written featuring items based on five enlistment motivators identified in Army research: training, education, adventure, money, and service to country (identified by the mnemonic TEAMS). TEAMS was administered to a sample (N = 150) of U.S. Marine Corps recruits at the Marine Corps Recruit Depot in San Diego, California and the data were analyzed.

Results and Discussion

In pilot administration, Marine Corps recruits cited service to country most frequently as first-ranking motivator, with education cited second most frequently as a primary motivator. Testing time ranged from slightly less than 3 minutes to 5-1/2 minutes.

Conclusions

1. TEAMS is capable of identifying and rank-ordering a person's dominant enlistment motives.

2. Because of its ease of administration and effectiveness in identifying motivators, TEAMS holds significant potential for enhancing the sales effort of the front-line recruiter.

3. Applications of this motivation assessment methodology might be feasible in other areas of personnel action.

4. Simple data-capturing procedures would permit results to be used in other areas of recruiting (e.g., advertising) as well as in longitudinal research.

5. Due to the similarity of recruiting efforts among the various branches of the armed services, the TEAMS technology may easily transfer to other branches of the armed forces as their recruiting services are automated.

Recommendations

The limited generalizability of the findings calls for administration of TEAMS to an applicant population.

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INTRODUCTION

Problem

Military recruiting requires a rapid means of identifying an enlistment applicant's motivation toward entering the service in order to facilitate the recruiting interview and, ultimately, to enhance classification and assignment.

Objective

The objective of this effort was to design, develop, and pilot test an automated instrument that would assess the relative strength of certain aspects of military service that are known to serve as motivators to enlistment.

Background

A Dual Need

Across the services, enlistment applicants are typically career-naive men and women entering their first full-time job (Baker, 1985). The military recruiter must acquaint the applicants with the various career opportunities available to enlistees, while accurately portraying the work milieu. If enlistment motivations (i.e., attractions to enter the service) can be determined, the recruiter can respond directly to these rather than launching into a long narrative, much of which may be irrelevant to the applicant.

Considered from another perspective, military recruiting is sales oriented. Today's market conditions present a unique challenge because of a declining youth population and the increasing competition for this shrinking cohort among the services and between the services and private-sector employers (Baker, 1985).

In the recruiting interview, there is a need to quickly focus the sales presentation. By identifying the prospect's "hot buttons," or dominant buying motives, and determining their relative strengths, the recruiter can tailor the sales approach to the prospect (U.S. Army Recruiting Command, 1986). This emphasis on the most relevant and appealing aspects of military service increases the likelihood of a sale (i.e., an enlistment).

In all, there is an urgent need for methodologies that will directly assist the recruiter in the dyadic encounter with someone considering military service as an employment option.

Reasons for an Automated Instrument

Given the time constraints affecting recruiting interviews (Baker, 1985), the identification and reporting of enlistment motivations must be rapid. This demands brevity in any instrument if there is to be hope of implementation, and almost precludes additional paper and pencil testing at the recruiting site. Additionally, although only the Army has fully computerized its recruiting stations (U.S. Army Recruiting Command, 1986), the Navy has now partially automated selected functions and fuller automation of recruiting functions is more a matter of when, than if.

The Motivators Used

Army recruiting sales doctrine has identified five distinct, recognizable "dominant buying motives" for enlistment (U.S. Army Recruiting Command, 1986). Use of these five has been supported in Army recruiting practice. The 5 motivators, designated by the mnemonic TEAMS, are:

1. <u>Training</u>: acquisition of job skills transferable to civilian work.

2. <u>Education</u>: schooling, formal coursework for academic credit.

3. <u>Adventure</u>: excitement involving courage and stamina.

4. <u>Money</u>: financial benefits obtainable from military service--salary, promotions, housing and food allowances, bonuses, etc.

5. <u>Service to country</u>: duty and patriotism.

These motivators were considered optimal to be used in development of a prototype instrument to assess the strength of these dimensions. Should such an automated instrument prove beneficial to recruiting, the various taxonomies of features and benefits employed by the recruiting branches of the other services could be used for developing similar, service-specific instruments.

Developmental Rationale

Previous research in the measurement of vocational interests indicates that it is unnecessary to construct elaborate inventories for use in interest assessment (Norris & Katz, 1970). If individuals understand the general concept of, for example, a clerical job, there is no need to ask a battery of questions about the separate tasks characteristic of that type of work (e.g., sorting, filing, organizing, alphabetizing). If respondents understand the job, they can simply answer the question, "Do clerical activities interest you?" and the degree of like or dislike can be scaled as accurately as if they had answered an entire inventory.

On the other hand, if the respondents do not understand what a clerical job is, their answers to the questions about sorting and filing will be unreliable and the inventory will be useless. Since the five TEAMS motivators are readily understandable with a minimum of analytical definition, it seemed probable that direct questions, such as "How important to you is money as a reason for enlisting?" would be just as productive as inventory-like batteries exploring attitudes towards salary, promotion, housing allowances, etc.

Computerized vocational guidance (CVG) systems have been based on work values, the underlying theory being that different occupations tend to provide varying amounts of opportunity to satisfy different work values. Once the user's values have been made explicit, these systems can provide mechanisms for locating occupations that tend to satisfy important values and perhaps help identify the risks of pursuing them (Chapman, Katz, Norris, & Pears, 1977).

Thus, such a guidance system defines each value on a computer screen and allows the user to indicate its importance to him or her on some relatively simple scale. This method is simple, direct, and effective. Since the TEAMS motivators are, in effect, work values, it seems likely that they could be successfully assessed in the same manner in CVG systems designed for military recruiting.

APPROACH

Instrument Development

The TEAMS motivators were defined in accordance with Army sales doctrine (U.S. Army Recruiting Command, 1986). A 7-point importance scale was constructed with responses ranging from "Not at All" (0) to "Wow!" (6). All instructions were edited to within the sixth grade reading level.

The instrument was constructed in two parts:

1. In the level of interest section, the motivation and its definition were displayed on the screen as an opportunity contained in enlistment. Beneath this appeared a 7-point scale. The test subject responded by pressing a key (0-6) (see Figure 1 for sample screen). This level-of-importance response was highlighted on the scale and, after a few seconds, the next motivator was shown. This continued until subjects had responded to all five motivators. On the final screen all responses were shown together, and the test subject was given an opportunity to change the response to any or all of the motivators.

```
TRAINING:  The Armed Services offer training
in hundreds of entry-level jobs.  The training
programs teach leadership, management skills,
and self-discipline.  Many of these skills, as
well as specific job skills, can be transferred
directly to civilian occupations.  Often you
can transfer training credit toward journey-
worker status in a civilian trade.




             IMPORTANCE TO YOU

  None                 Medium                Wow!
    0-----1-----2-----3-----4-----5-----6


Press the number (0-6) to show how important TRAINING is to you.
```

Figure 1. Level of interest scale.

2. Following a screen prompt, the rank-ordering section appeared. Here the test subject ranked all five motivators in importance from highest to lowest (see Figure 2). Again, an opportunity was given to change responses until satisfied.

At the end of the session, a screen display depicted the test subject's completed response protocol, as illustrated in Figure 3.

```
(1) SERVICE TO COUNTRY:                                    most important
        knowing that I am serving my country                  ? ? ?


(2) ADVENTURE:                                          2nd most important
        living a life of excitement and challenge


(3) TRAINING:                                           3rd most important
        getting job training and learning new skills


(4) MONEY:                                              4th most important
        earning regular income plus food, housing,
        promotions, bonuses, etc.

(5) EDUCATION:                                          5th most important
        getting more education and credits toward a
        college degree
```

```
┌───────────────────────────────────────────────────────────────────────┐
│ The five satisfactions are listed above.                              │
│ Which one of these is most important to you?  Press its number.       │
│ (You can change the order later, if you want.)                        │
└───────────────────────────────────────────────────────────────────────┘
```

Figure 2. Rank-ordering scale.

name:

REASON	IMPOR-TANCE	RANKING	IMPORTANCE LEVEL
TRAINING	6	5	Very great
EDUCATION	5	3	Above average
SERVICE TO COUNTRY	4	1	Above average
ADVENTURE	3	4	Average
MONEY	1	2	Below average

```
This reasons are listed in the order of their
importance to you.  The most important reasons
are nearest to the top.

                    Press SPACE BAR.
```

Figure 3. Completed response protocol screen.

Programming

Programming was in Turbo PASCAL and featured user-friendly, menu-driven software with color graphics. The software operates on an IBM-PC or any compatible microcomputer.

Test Administration

Four IBM-PC microcomputers were set up in a testing room at the Marine Corps Recruit Depot (MCRD), San Diego. Marine Corps recruits (N = 150) were randomly selected from the receiving barracks. Personnel were chosen from the receiving barracks (i.e., before starting boot camp) in an attempt to minimize bias. As a group, the recruits were briefed on the instrument and its purpose and were assured that participation would not affect their service status or career progression.

The four testing stations were activated and kept in operation until all persons were tested. Each administration began with on-line instructions and the recruit's entry of name and social security number. Drill instructors circulated through the room periodically but did not speak with the subjects during testing. At the end of each test administration, individual results were saved in a data file coded by social security number. Individual responses for each item (training importance, training rank, education importance, etc.) were tabulated by simple summation.

Responses to the Motivators

Table 1 shows the frequency with which each of the TEAMS items was scored as the top choice. Service to country was the most frequently chosen primary motivator (31.3%), and education was close behind (27.3%). Worthy of note here is that money was the top motivator for only 2.7 percent of the recruits.

Table 1

Frequency Distribution for First Choice Value on TEAMS

First Choice	Frequency	Percent of Respondents
Service	47	31.3
Education	41	27.3
Training	34	22.7
Adventure	24	16.0
Money	4	2.7

For second choice motivator, training was most favored (32.7%) followed by education (21.3%), as seen in Table 2. At the second-choice level, money, service, and adventure assumed nearly equal positions (16, 16, and 14%, respectively).

Table 2

Frequency Distribution for Second Choice Value on TEAMS

First Choice	Frequency	Percent of Respondents
Training	48	32.7
Education	32	21.3
Money	25	16.7
Service	24	16.0
Adventure	21	14.0

Table 3 illustrates that all the motivators were highly regarded by the group--although an individual score on the total scale could range from 0 to 6, the means ranged from 4.5 (money) to 4.99 (service), suggesting that many items received the maximum importance score of 6. Ties were broken, of course, by the ranking scale. Examination of the data printouts revealed that 20 of the 150 recruits assigned a value of 6 ("Wow!") to four or five items.

Table 3

Means and Standard Deviations of TEAMS Scores

Motivation	Importance[a]		Rank[b]	
	Mean	SD	Mean	SD
Training	4.96	1.35	2.46	1.13
Education	4.78	1.43	2.75	1.46
Service	4.99	1.39	2.82	1.56
Adventure	4.89	1.35	3.36	1.43
Money	4.54	1.39	3.60	1.12

[a]Importance was measured from 0 "No Importance," to 6 "Wow."

[b]Rank-ordering was measured from 1 "First Choice," to 5 "Last Choice."

As illustrated in Table 4, when second choice motivator was combined with first choice, a different result emerged. Twenty-two percent of the recruits chose the combination of education as first choice with training as second.

Table 4

Frequency Distribution for First and Second Choice TEAMS Items

First Choice	Second Choice	Frequency (Subjects)	Percent (Respondents)
Service	Training	16	10.66
	Education	17	11.33
	Adventure	11	7.33
	Money	3	2.00
Total		47	31.32
Education	Training	22	13.33
	Money	9	6.00
	Service	9	6.00
	Adventure	1	.66
Total		41	24.39
Training	Education	11	7.33
	Money	9	6.00
	Service	6	4.00
	Adventure	8	5.33
Total		34	22.66
Total		122	78.37

A Pearson correlation was conducted on the importance ratings of TEAMS items. The mean score for all items was 4.6, and scores ranged from 0 ("No Importance") to 6 ("Wow"), indicating great importance or motivational value. Inspection of Table 5 discloses that money correlated with two motivators--adventure ($p < .01$) and education ($p < .001$). Training correlated with education ($p < .001$) and service correlated with adventure ($p < .05$).

Ease of Administration

Subjects displayed appropriate attitudes toward the testing situation, and none declined to participate in the study. Based on random observations, few test subjects availed themselves of the opportunity to alter responses. Subjects had no difficulty with either the computerized test format or the computer itself, and no recruits required assistance from the test administrator. The computer program did not capture test administration time. However, random timings made by the test administrators revealed that the mean testing time was 4 minutes and 43 seconds, and times ranged from 2 minutes and 46 seconds to 5 minutes and 14 seconds. One subject took 11 minutes to complete the test, but that time was not included in determining mean testing times.

Table 5

Intercorrelations of Importance Ratings of TEAMS Items
(N = 150)

	Training	Education	Adventure	Money	Service
Training	1.0	.36***	.16*	.12	.16*
Education	--	1.0	-.06	.30***	-.01
Adventure	--	--	1.0	.24**	.19*
Money	--	--	--	1.0	.02
Service	--	--	--	--	1.0

Scale: 0 = "No Importance," 6 = "Wow."
  *p < .05.
  **p < .01.
  ***p < .001.

DISCUSSION

The mean importance scores for all motivators indicated that the test group tended to score all items high. Many subjects took extra time during the rank-ordering, suggesting that discriminating between highly rated items was difficult, but the forced choice did reveal service to country as the primary incentive for enlistment. If several motivators have equal strength, however, it may make little difference which two of them are selected for the focused sales effort by the recruiter (Norris & Baker, 1986).

The information in Table 4 appears to support the Army market segmentation concept (U.S. Army Recruiting Command, 1987) in that those recruits whose first choice was either training or education gave low priority to adventure.

Many findings from this pilot test support the viability of TEAMS--administration was quick, subjects understood the procedure, experienced no difficulty, and responded appropriately. However, the specific strength of enlistment motivators found for this population may not generalize to the target population of civilians.

The finding that service to country was the most frequently cited first choice motivator to enlistment may be an artifact of the intense socialization and acculturation already underway, even though subjects had not yet begun training. Culture shock resulting from induction processing and anticipation of the physical and emotional rigors of boot camp may even have mobilized some expressions of cognitive dissonance among persons at the threshold of commencing such intensive training (Festinger, 1957).

Additionally, the presence of the drill instructors in the testing room may have had some subtle, if not direct effect upon subjects. Recruits deliberating over rank-ordering of such items as training, which may be perceived as offering a self-serving benefit to the subject, and service to country, which the subject may perceive as a more socially

acceptable reason for enlisting, may have chosen to indicate less self-serving motivators as a means of appearing more altruistic.

Although the recruits were in a pre-training phase, they represent persons who: (1) have self-selected through a decision to enlist, (2) chose the Marine Corps, and (3) have been screened in the course of the enlistment process. The possible effects of such subject biases underscore the need for extending this research into the target population.

Such a population would include all persons who are considering enlistment and have entered a recruiting station for information. Some would decide against enlistment and some would decide in its favor. Of this first group, some would be found ineligible for service and the remainder would enlist. Because the test subjects already were self-selected in favor of enlistment and found eligible, there were no representatives of those who rejected enlistment or those who failed to meet enlistment criteria. Until TEAMS can be tested with the population of interest, the actual effects of this subject bias will remain unknown.

An even more beneficial research pattern that would assist in broadening the generalizability of TEAMS would involve administration to (1) other-service recruits, (2) all-service enlistment applicants, and (3) unselected enlistment-age youth.

The TEAMS motivators were suitable for use in prototype instrument development. In sum, the TEAMS instrument successfully identified the top motivators and indicated their relative strengths. In this pilot application, TEAMS accomplished this in less than 5 minutes, indicating that it shows promise for the time-pressured recruiting milieu.

In the Army's computerized recruiting stations, TEAMS can be employed as designed: to assist the recruiter in identifying dominant buying (enlistment) motives.

Additional Applications

A number of uses suggest themselves. First, should TEAMS prove beneficial to recruiting, the various taxonomies of features and benefits employed by the recruiting branches of the other services could be used for developing similar, service-specific instruments. TEAMS also may prove useful in recruiter training, especially in role playing situations.

Simple data-capturing procedures would permit results to be used in other areas of recruiting (e.g., advertising) as well as in longitudinal research.

TEAMS could be integrated into a more self-governing system as well. Based on the top choice, for example, the computer would immediately branch to a presentation of relevant features and benefits. In the same vein, a self-contained computerized system could be designed for walk-up use at job fairs, counseling offices, or even stores and shopping malls. There, when a passerby took the TEAMS, the system would present appropriate information, and perhaps provide the local recruiter's name and phone number as a source of additional information.

CONCLUSIONS

1. TEAMS is capable of identifying and rank-ordering a person's dominant enlistment motives.

2. Because of its ease of administration and effectiveness in identifying motivators, TEAMS holds significant potential for enhancing the sales effort of the front-line recruiter.

3. Applications of this motivation assessment methodology might be feasible in other areas of personnel action.

4. Simple data-capturing procedures would permit results to be used in other areas of recruiting (e.g., advertising) as well as in longitudinal research.

5. Due to the similarity of recruiting efforts among the various branches of the armed services, the TEAMS technology may easily transfer to other branches of the armed forces as their recruiting services are automated.

FUTURE RESEARCH

After disseminating the results of this research to the recruiting services and demonstrating the use of the instrument, TEAMS should be administered to an applicant population, preferably a cross-service sample. TEAMS should also be administered to a sample of unselected persons such as high school seniors. Until TEAMS can be tested with the population of interest, the actual effects of subject bias will remain unknown.

Longitudinal research should also be undertaken. TEAMS could be re-administered periodically to assess the persistence of these motivators over time.

10

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